

## **REMARKS**

In the Office Action mailed September 27, 2007 claims 1-3, 5-20, 35-37, 58 and 60-75 are currently pending. The disclosure of the specification stands objected to because of various alleged informalities. Claims 11, 16-17 and 68 stand objected to due to various informalities.

Claims 1-3, 5, 7-20, 35-37, 58 and 60-75 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Barton et al. (US Publication No. 2003/0095791) (“Barton 791”). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Barton et al. (US Publication No. 2003/0095791), as applied to claim 2, in view of Sull et al. (US Publication No. 2006/0064716) (“Sull 716”).

Applicants respectively traverse. After a careful review of the pending Office Action, the cited references, and Applicants’ clarifications to the presently pending claims, Applicants respectively request reconsideration in view of the following remarks.

### **I. OBJECTIONS TO THE SPECIFICATION**

The disclosure of the specification is objected to because of informalities. Specifically, the present Office Action objects to the failure of the present specification to include the various serial numbers in paragraphs [0005] and [0006]. Applicants have modified these paragraphs with the desired information and therefore respectively request that these objections be withdrawn.

### **II. CLAIM OBJECTIONS**

Claims 11, 16-17 and 68 stand objected to due to various alleged informalities. As suggested by the presently pending Office Actions, revisions to these claims have been made. Accordingly, Applicants respectively request that these objections be withdrawn.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)**

Claims 1-3, 5, 7-20, 35-37, 58 and 60-75 are rejected under 35 U.S.C. 102(e) as being allegedly anticipated by Barton et al. (US Publication No. 2003/0095791).

#### ***A. Applicants' Presently Claimed Invention***

Applicants' presently claimed invention relates generally to enabling web users easy access and control of media-based devices and appliances over computer networks, and more specifically, to a method, system and computer medium for remote control of a digital video recorder from a client user interface both in communication with the internet. Applicants' Specification pg. 2, ¶ [0007].

Importantly, and as Applicants explain referring to the block diagrams of FIGs. 3 and 4B, the servers 28-1 through 28-n included in an embodiment of network computing system 12a are described in detail. For convenience and ease of understanding the invention, reference will interchangeably be made to "servers 28" to generically describe features of servers 28-1 through 28-n. Also for convenience, like reference numerals have been used for similar components used in both the client computer 18, and the servers 28. Servers 28 are generally responsible for presenting the front end 14a of computer system 10A to a user at the client 18. In one embodiment, servers 28 may be web portals, which is defined to mean a web "supersite" that provides a variety of online services. Alternatively, servers 28 may be web-sites provided by and/or web-hosted by unrelated entities and system administrators. These particular embodiments are well-suited for the situation when network 24 is the Internet. Applicants' Specification pg. 27, ¶ [0091].

Referring to FIG. 4B, Applicants explain further details of a particular embodiment of a main memory unit 78B for a server 28 are shown, by way of example. In the embodiment of

FIG. 4B, the memory unit 78B preferably comprises an operating system 88, other applications 90, server application programs 92 (“servers 92”), and a “front end” server application 94, all communicatively coupled together via system bus 74. Server 92 may be any conventionally known server application, like for example, and Apache HTTP server. Front end server application 94 is an interface for establishing communication with the middle tier server 40 by sending and receiving requests and data to the API. In general, servers 28 may host front end 14a and are typically external websites relative to systems 14a and 16a. Because servers 28 can represent a variety of general purpose websites, some functioning as a “supersite” that provide various online services, while others being for more limited purposes, for convenience and to avoid obscuring the invention with unnecessary details, reference to server 28 will interchangeably be made herein to “web portals 280.” Applicants’ Specification pg. 28, ¶ [0093].

Applicants’ FIG. 13A presents a data flow diagram illustrating the process 230 of one method for a user to obtain information from and provide instructions to systems 10A and 10B. FIG 13B is a sequence diagram illustrating further details regarding the data flow of FIG. 13A. Throughout this figure, data flow lines (used interchangeably with “steps”) reflect an order in which part of the method is preferably practiced. In the description to follow, occasional reference will also be made to FIGs. 2 and 5. Before the process 230 of obtaining information from and providing instructions to system 10A and 10B begins, a user navigates to 229 a website for one of the servers 28-1,...m 28-n, which responds with an appropriate web page 231. The process 230 begins with the user login 232 into system 10A or 10B. A user enters identifying information, as for example, in the user interface 180 of FIG. 11. A user name and password are transmitted from the client browser to the database as indicated by steps 232, 234 and 236 in Fig.

13B. Once the user is authenticated with predetermined information on the database, a first page 190 of information such as an EPG is shown in Fig. 12A is formation 240 from data received from the database 238, and is forwarded 242 to client browser 20. Such first page 190 of information, as well as subsequent pages, may include drop-down menus such as those illustrated in FIG. 12B, as well as buttons such as the “Go” button 192 seen in FIG. 12A. The user may select a desirable entry within each drop-down menu and/or click on the “Go” button 192 to invoke a command. Upon doing so, the browser 20 sends a HTTP request to an already connected web server such as 28-1, as shown in step 232. Those skilled in the art will recognize that the drop-down menu and button-driven features may be implemented in a variety of ways. Applicants’ Specification pg. 57-58, ¶ [0159].

Once the HTTP request is received at server 28-1, the server 28-1 will initiate the appropriate steps, or make the appropriate function calls, within the context of the API on the middle tier server 40, as indicated in flow line 234. The step further involves communication 236 between the middle tier server 40 and the database 44. Flow line 236 illustrates the steps in which the middle tier server 40 obtains the requested information from or stores instructions into the database 44. One manner for doing so is the JDBC (Java DataBase Connectivity, otherwise known as the Java™ database API) wherein raw data is sent from the middle tier server 40 to database 44. The database 44 will return the requested data preferably, although not required, in a raw format to the middle tier server 40 as indicated by flow line 238. Applicants’ Specification pg. 58, ¶ [0160].

The middle tier server 40 assembles the retrieved data and updated information into formatted data, which are forwarded 240 to the web server 28-1. It is noted that the API on the middle tier server 40 includes that programmable logic to package (i.e., format) data received in

a raw format into a form that is well-suited for flexibly defining data structures. One format that is advantageous is XML because it allows the tagging of data in a manner that is not tightly coupled together, thereby providing more flexibility in defining data structures. Other formats, though, will work suitably well with the described embodiments of the present invention, including HTML. Applicants' Specification pg. 58, ¶ [0161].

The middle tier server 40 enables communication between various web portals 28-1...28-n and the database 44 through an API, which facilitates the communication of user instructions and operations for controlling the DVR 37 with the front end 14a. One technical advantage of the API is that it allows a portal (e.g., 28-2) to cache information received from the middle tier server 40 locally within the environment of the particular portal such as 28-2 with a frequency based upon when a user is interested in the information. Furthermore, the API of the described embodiment of the present invention is flexible so as to permit a portal 28-2 to present the content of information from the middle tier server 40 in a manner that enables display of information using proprietary types of graphical user interfaces (i.e., GUIs) distinctive to those system administrators operating the particular portal (e.g., 28-2). Business logic (e.g., checking of time conflicts for recording disk space) may be included in the middle tier server 40 to form a part of the API that provides a standardized mechanism for receiving request forwarded from the portals 28-1...28-n, and for sending back a corresponding response.

In order for the web server 28-1,...,28-n such as portal 28-2 to present the interactive television device data a the web browser 20, each web portal is enabled to use, copy, encode, store, archive, distribute, transmit, modify, translate, render into an audible format, publicly display and publicly perform the content received from database 44, in whole or in part in connection with the property of the web portals 28-1, ..., 28-n. The API enables the web portals

to allow users at the browser 20 to download and print or perform the content. This content includes the interactive television device data, like for example, a top watched shows list. The API of the described embodiments of the present invention permits the content to fit the format and look-and-feel of the particular web portal. Applicants' Specification pg. 59-60, ¶¶ [0162, 0163].

Applicants' FIG. 16B illustrates on a high level how a web server, e.g., portal 28-2, may utilize the API routines to access and manipulate data in the databases 268 in response to various user requests 260 in accordance with one embodiment of the present invention. Note that database 44 in FIG. 2 and in FIG. 5 is merely illustrative, and that the embodiment shown in FIG. 16B, which illustrates four databases 280, 282, and 284 and 286 each of which will be described below, works suitably well. The API routines 264 shown in FIG. 16B are designed to extract data from and to insert instructions into the databases 268. The predominant directions of data flows are indicated in the figure by the directions of the arrows connecting each routine to one or more databases. However, some parameters or exchange of triggering data is presumed to have occurred before any substantial amount of data is transferred to or from the databases 268. The database 280 contains information related to the user and comprises, for example, a replica of a commercial authentication database such as SilkNet™ and additional user profile data. This database is accessed by the API routines CreateAccount 288, Login 290 and GetProfile 292 that together authenticate a user and initialize communication between the user and the systems 10A and 10B, through the server 28-1 and the middle tier server 40. The box profile database 282 archives information related to individual media-based devices, including the respective channel lineups. This database 282 is accessed by GetProfile 294 as well as GetChannelLineUp 296 in response to a user request to view information related particularly to the DVR 37 that the user

wants to operate. The EPG database 284 may either be a commercial database such as an online service 54 or a database containing already extracted information from a commercial source. This database 284 is accessed by GetEPG 298 and ShowGuide 300 to retrieve program information. The box transaction database 286 includes information related to programs recorded by the DVR 37 and requests for the DVR 37 to record future programs. This database 286 exchanges information with the middle tier server 40 every time a request is made through the AddRequest routine 304, or DeleteRequest routine 3006. It is also accessed in response to user request to view related information through GetReplayGuide 302. Applicants' Specification pg. 61-62, ¶ [0166].

Applicants' presently claimed invention is expressly directed to a computer-implemented method for enabling a user to remotely control a media based device and to access related information from a web portal and an API that is located remotely from the web portal. Applicants' API permits data retrieved from a database to fit a format associated with the web portal. Specifically, Applicants' presently pending claims are directed to an API that is located remotely from the web portal and that permits the content to fit the format and look-and-feel of the particular web portal. Applicants' Specification pg. 59-60, ¶ [0162, 0163].

For example, Independent Claim 1 expressly recites the step of "providing an Application Program Interface (API) located remotely from the web portal that, in operation, permits data retrieved from at least one database concerning the media-based device to fit a format associated with the web portal." The remaining Independent Claims, Claims 35, 58, and 60 recite similar limitations.

B. *Barton 791 Does Anticipate Applicants' Presently Claimed Invention*

Barton 791 does not anticipate Applicants' presently claimed invention. Unlike

Applicants' presently claimed invention, Barton 791 does not teach or suggest to an API, let alone an API located remotely from a web portal. Naturally, therefore, Barton 791 fails to teach or suggest an API located remotely from a web portal that permits the content to fit the format and look-and-feel of the particular web portal.

Rather, Barton 791 appears generally directed to a system and method for remote access to personal television service. According, to Barton 791, a user may access to the personal TV service center through a remote computer terminal or a personal digital assistant which is connected to a computer network. Barton 791, Abstract. The system of Barton 791 appears to utilize a Personal TV Service Center that includes a Web Server 200, a Program Database 85/210, a User Database 220, and an Event Database 230. A Web Browser interacts with the Personal TV Service Center. *See, e.g.*, Figure 2 of Barton 791. This system of Barton 791 does not utilize an API let alone an API located remotely from a web portal.

According to the presently pending Office Action, Barton 791 teaches Applicants' "Application Program Interface (API)" relying on the following of Barton 791:

Figure 5, the GUI 500 for program selection and is used both on the DVR front panel and is incorporated into the Web pages and is used both on the DVR front panel and is incorporated into the Web pages presented to remote users by the Web server 200, [0044], [0051]-[0056] that, in operation, permits data (the program guide) retrieved from at least one database (Figure 2, 3, User database 220, [002]-[0032]; Figure 4, in step 440, the web server presents program guide to the user after the user is identified and authenticated, [0048]) concerning the media-based device to fit a format associated with the web portal (Figures 5, 6, [0051]-[--56].

September 27, 2007 Office Action at page 3. Applicants respectively traverse. The Barton 791 GUI (Graphical User Interface) is not an API, let alone Applicants' presently claimed API.

As Applicants' describe in detail above, Applicants' API is not located in the web portal but remotely, in a middle tier server 40. As Applicants describe, in one preferred arrangement,



once the HTTP request is received at server 28-1, the server 28-1 will initiate the appropriate steps, or make the appropriate function calls, within the context of **the API on the middle tier server 40**, as indicated in flow line 234. (emphasis added). The step further involves communication 236 between the middle tier server 40 and the database 44. Flow line 236 illustrates the steps in which the middle tier server 40 obtains the requested information from or stores instructions into the database 44. One manner for doing so is the JDBC (Java DataBase Connectivity, otherwise known as the Java™ database API) wherein raw data is sent from the middle tier server 40 to database 44. The database 44 will return the requested data preferably, although not required, in a raw format to the middle tier server 40 as indicated by flow line 238. Applicants' Specification pg. 58, ¶ [0160].

The middle tier server 40 assembles the retrieved data and updated information into formatted data, which are forwarded 240 to the web server 28-1. Applicants have noted **that the API on the middle tier server 40** includes that programmable logic to package (i.e., format) data received in a raw format into a form that is well-suited for flexibly defining data structures. One format that is advantageous is XML because it allows the tagging of data in a manner that is not tightly coupled together, thereby providing more flexibility in defining data structures. Other formats, though, will work suitably well with the described embodiments of the present invention, including HTML. Applicants' Specification pg. 58, ¶ [0161].

The GUI (Graphical User Interface) taught in Barton 791 appears to be some type of graphical interface that allows a user to enter information into a device. An API, on the other hand, is an application programming interface that allows one computer program to communicate with another such program. As just one example, an API is an interface that

allows web browsers or web servers to communicate with other programs. Applicants make clear this distinction in their Specification.

For example, as Applicants explain, the middle tier server 40 enables communication between various web portals 28-1...28-n and the database 44 through an API, which facilitates the communication of user instructions and operations for controlling the DVR 37 with the front end 14a. One technical advantage of the API is that it allows a portal (e.g., 28-2) to cache information received from the middle tier server 40 locally within the environment of the particular portal such as 28-2 with a frequency based upon when a user is interested in the information. Furthermore, the API of the described embodiment of the present invention is flexible so as to permit a portal 28-2 to present the content of information from the middle tier server 40 in a manner that enables display of information using proprietary types of graphical user interfaces (i.e., GUIs) distinctive to those system administrators operating the particular portal (e.g., 28-2). Business logic (e.g., checking of time conflicts for recording disk space) may be included in the middle tier server 40 to form a part of the API that provides a standardized mechanism for receiving request forwarded from the portals 28-1...28-n, and for sending back a corresponding response. Applicants' Specification pg. 58-59, ¶ [162].

In an effort to further clarify Applicants' presently claimed invention, independent claim has been further modified to specify that the API is not part of the web portal but rather "located remotely from the web portal." All remaining independent claims recite a similar limitation.

To anticipate a claim, "each and every element set forth in the claim [must be] found, either expressly or inherently described, in a single . . . reference." *Vergall Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (M.P.E.P. Section 2131). Consequently, since Barton 791 does not teach or suggest utilizing an API, Barton 791 also does not teach or

suggest an API that permits the content to fit the format and look-and-feel of the particular web portal. Barton 791, therefore, naturally does not teach or suggest an API located remotely from any type of web portal. As such, Barton 791 simply also does not teach or suggest every element of the claimed invention and, therefore does not anticipate Applicant's presently pending Independent Claims.

Consequently, Independent Claims 1, 35, 58, and 60 are allowable for at least all of the reasons stated above. The remaining claims are all dependent on these allowable independent claims and are therefore allowable for at least the reasons stated above.

If there are any matters that may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicants' undersigned representative at (312) 913-0001.

#### **IV. SUMMARY**

Applicants respectfully submit that, in view of the remarks above, the present application, including claims 1-3, 5-20, 35-37, 58 and 60-75 is in condition for allowance and solicit action to that end.

If there are any matters that may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicants' undersigned representative at (312) 913-0001.

Respectfully submitted,

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